

1. The amendment filed 2/11/08 has been considered and entered. Claims 2 and 11 have been canceled. Claims 12-16 have been added. Claims 1,3-10 and 12-16 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the Terminal Disclaimer filed 2/11/08 and approved 3/27/08, the Double Patenting rejection has been withdrawn.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1,3-10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (5,747,102) or Ciardella et al. (5,505,777) in combination with Hynes et al. (6,447,847) further in combination with Messerly et al. (6,253,957).

Smith et al. (5,747,102) teaches a method and apparatus for dispensing small amounts of liquid material. A valve is opened to dispense a stream of material through an orifice of a nozzle. The stream of material is broken into droplets by rapidly closing the valve. A uniform film can be formed from the droplets (abstract, col. 6, lines 20-50 and col. 11, line 45 – col. 12, line 8). The dispensing head can be manipulated in an X,Y and Z direction (col. 15, lines 4-45).

Ciardella et al. (5,505,777) teaches a computer controlled viscous fluid dispensing system. A dot generator is supported for motion in an X,Y and Z axes generates a jet of viscous material on the circuit board (abstract). The solenoid produces a rapid volume displacement which causes the jet of adhesive to be rapidly ejected from the nozzle. The jet breaks away as a result of its own forward momentum and forms into a dot on the upper surface of the circuit board (col. 4, lines 1-7). The viscous material dispensed can include an encapsulant (i.e. a conformal coating) (col. 9, lines 60-65).

Smith et al. (5,747,102) or Ciardella et al. (5,505,777) fail to teach specifically recite that the viscous material can be a conformal coating.

Hynes et al. (6,447,847) teaches a conformal coating system wherein the dispensing mechanism is moveable in the X,Y and Z directions as well as rotation about the Z axis (abstract).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Smith et al. (5,747,102) or Ciardella et al. (5,505,777) dispensing

system to dispense a conformal coating of Hynes et al. (6,447,847) with the expectation of achieving a more precise deposition of the conformal coating as well as success with similar viscous materials.

Smith et al. (5,747,102) or Ciardella et al. (5,505,777) in combination with Hynes et al. (6,447,847) fail to teach a valve closure element and a valve seat.

Messerly et al. (6,253,957) teach a suitable apparatus for forming droplets that comprises a valve seat and a valve closure element; the valve member will compress the valve seat material and block the outlet bore as a minute droplet is dispensed (col. 4, line 26-29)

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smith et al. (5,747,102) or Ciardella et al. (5,505,777) in combination with Hynes et al. (6,447,847) dispenser with the valve as evidenced by Messerly et al. (6,253,957) to apply the droplets in of applicant because Messerly et al. (6,253,957) with the expectation of achieving similar success, i.e. both apparatus are suitable for droplet application.

Response to Amendment

6. Applicant's arguments with respect to claims 1,3-10 and 12-16 have been considered but are not found persuasive.

Applicant argued that the prior art fails to provide motivation to combine the references as the Examiner has done.

The Examiner disagrees. The test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would

suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges*, 783 F.2d 1038.

Regarding the lack of motivation, it has been well settled that the motivation to combine does not have to be explicit but can be implicit. It is not necessary that the prior art suggest expressly or in so many words the changes or possible improvements the inventor made but that the knowledge be clearly present. *In re Sernaker*, 217 USPQ 1 (Fed. Cir. 1983).

As detailed above, the combination of reference teach the various features of the nozzle including the valve seat and valve closures as well as the process to operate these features to form the droplet of material for deposition onto the substrate. The desired “pattern” or “area” chosen to be coated is deemed as a matter of design choice by one practicing in the art absent a showing of criticality regarding the claimed deposition.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian K Talbot/
Primary Examiner, Art Unit 1792

BKT

